

CLAIMS

1. An apparatus for dyeing fiber or filament comprising:
 - (a) plurality of prewetting troughs;
 - (b) plurality of dye baths; and
 - (c) a drying arrangement;
characterized in having a supporting system for carrying and dyeing the fibers continuously and homogeneously.
2. An apparatus for dyeing fiber or filament as claimed in claim 1 wherein the supporting system comprises a belt for carrying and dyeing fiber.
3. An apparatus for dyeing fiber or filament of claim 2 wherein the belt is a porous belt.
4. An apparatus for dyeing fiber or filament of claim 1 or 2 wherein the supporting system comprises at least two belts to carry and dye the fiber.
5. An apparatus for dyeing fiber or filament of claim 1 or 2 wherein cotton fiber is carried between the porous belts.
6. An apparatus as claimed in claim 1 or 2 wherein the belt is a synthetic or natural fabric.
7. An apparatus as claimed in claim 1 or 2 wherein the belt is a blended fabric.
8. An apparatus as claimed in any of the preceding claims wherein the supporting system is inert to dyeing.

9. An apparatus for dyeing cotton fiber of claim 5 wherein the supporting system is a porous tubular network.
10. A method for dyeing fibers comprising :
 - (a) carrying fibers using a supporting system;
 - (b) pre-wetting the fibers along with the supporting system;
 - (c) dyeing fibers along with the supporting system; and
 - (d) drying the fibers;

wherein the dyeing of fibers is continuous and homogenous.
11. A method for dyeing fiber as claimed in claim 10 wherein the fiber is carried between the supporting systems.
12. A method for dyeing fibers as claimed in claim 10 wherein the fiber for dyeing includes cotton and other natural fibers, man made and synthetic fibers as well as filaments and a combination thereof.
13. A method for dyeing fibers as claimed in claim 10 wherein the fiber is the cotton fiber.
14. A method for dyeing fibers as claimed in claim 13 comprises a step of preparing a fiber rope for carrying cotton fibers.
15. A method for dyeing fiber as claimed in claim 10 wherein the dye includes indigo, vat dye, sulfur dye, reactive dye and the like, or combination thereof.

16. A method for dyeing fiber as claimed in claim 10 wherein fibers are indigo dyed.

17. A method for dyeing fiber comprising the steps of:

- (a) forming a roving form of fiber;
- (b) prewetting the fiber in roving form;
- (c) dyeing the fiber in roving form;
- (d) drying the fiber in roving form;

wherein the fibers are dyed continuously and homogenously.

18. A method for dyeing fiber as claimed in claim 17 wherein the roving form of fiber for dyeing includes cotton and other natural fibers, man made and synthetic fibers as well as filaments and a combination thereof.

19. A method for dyeing fiber as claimed in claim 17 wherein the fiber for dyeing is cotton fiber.

20. A method for dyeing fiber comprising the steps of

- (a) forming a tow form of filaments ;
- (b) prewetting the filaments in tow form;
- (c) dyeing the filaments in tow form;
- (d) drying the filaments in tow form;

wherein the filaments are dyed continuously and homogenously.

21. A method for preparing yarn comprising the steps of:

- (a) blending dyed fibers with un-dyed or other dyed fibers and spinning the indigo melange yarns;
- (b) spinning yarn directly from dyed fibers.